

ARTIFICIAL INTELLIGENCE AND THE SOCIETY: NAVIGATING THE IMPACT OF AI ON JUSTICE, FREEDOM AND HUMAN RIGHTS

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Abstract

In an era defined by rapid technological advancement, the transformative potential of Artificial Intelligence (AI) stands both as a beacon of hope, promise and a challenge. It has become increasingly evident that AI is not just a tool for innovation but, when deployed responsibly and ethically, can be a force for social innovation and change – improving equity and human rights, shaping societies and redefining the global landscape. The potential of AI to impact society has been noted by scholars, while it has been touted as providing solutions to many social problems, it also has the potential to perpetuate existing inequalities and injustices. It has been shown to replicate, amplify and even exacerbate biases related to race, gender and other social factors. It is, therefore, essential to consider the implication of AI development on issues like justice, human dignity and human rights in order to ensure that AI benefits equitably across populations and demographics without amplifying the already existing inequalities. This paper, seeks therefore, to examine the impact of AI on justice, human freedom and human rights especially those rights that are most impacted or most likely to be impacted by AI. The paper posits that AI can impact social justice through biased decision making, job displacement and so on. It therefore, recommends increased transparency and accountability in AI decision-making so that its benefits can be shared fairly and equitably across society.

Keywords: Artificial intelligence (AI), social justice, human rights, freedom, race, gender.

Introduction

According to Amoroso and Tamburrini (2019), Artificial Intelligence (AI) is a broad term covering any technique designed to solve problems traditionally assigned to human intelligence. AI is described by many as a collection of technologies that combine data, algorithms and computing power. This may be true for the most widely used AI systems at present, this is only a very limited description of what AI is. AI is a container term for many computer applications, some of which combine data and algorithms, but other non-data-driven AI approaches, also exist, e.g. expert systems, knowledge reasoning and representation, reactive planning, argumentation and others.

Artificial Intelligence as a general-purpose technology is predicted to have a deep impact on the society particularly in the areas of justice, human rights, democracy and rule of law, the future of work and employment. In 2017, the European Economic and Social Committee (EESC), in what is widely considered the ‘inception report’ on the broader societal impact of AI, identified the most important societal impact domains including: safety; ethics; laws and regulation; democracy; transparency; privacy; work; education and (in)equality. The Committee also undertook to develop AI applications that benefit society, promote inclusiveness and improve people’s lives and also fund research into the societal impact of AI. This, it hopes will lead to increased social involvement, trust and support with respect to the further sustainable development and use of AI.

Again, in 2019, the AI High Level Expert Group on AI presented Ethics Guidelines for Trustworthy and defined trustworthy AI as being lawful, ethical and socio-technically robust. The guideline recognized fundamental rights as the basis for trustworthy AI and outlined the following seven (7) requirements for trustworthy AI: human agency and oversight; technical robustness and safety; privacy and data governance; transparency; diversity, non-discrimination and fairness; social and environmental well-being and accountability.

The World Economic Forum (2024), notes the astonishing pace at which AI technologies are evolving. It says that from machine learning algorithms to natural language processing systems, innovations in AI have permeated various facets of human lives, permeating efficiency, optimization and new avenues for problem-solving.

Artificial Intelligence is a rapidly growing field that has the potential to impact society in very profound and significant ways and solve complex problems, it offers groundbreaking opportunities in many diverse areas such as education, healthcare, governance, environmental protection and more but it can also pose significant ethical, security and societal challenges such as job displacement, privacy invasions, amplification of biases encoded in AI algorithms and so on.

AI systems are not just about the software components but also about the social structures around it, the organizations, people and institutions that create, develop, deploy, use and control it and the people affected by it, such as citizens in their relations to government, fellow human beings and or even the entire society (WEF, 2024). This paper seeks, therefore, to explore the impact of AI on social relations especially in the area of justice, freedom and human rights. This is to ensure that the powers of AI driven technologies are properly harnessed so that they can benefit the society, promote equity, inclusivity and sustainability.

Defining concepts

Artificial Intelligence

Artificial Intelligence (AI) is a domain of computer science which deals with the development of intelligent computer systems capable of perceiving, analyzing and reacting accordingly to the inputs. Robinson (2018) defined it as the ability of a digital computer, computer-controlled machine or robot to perform tasks commonly associated with intelligent beings like humans. According to McCorduck (2004), it is sometimes called machine intelligence and is intelligence demonstrated by machines in contrast to natural intelligence displayed by humans and other animals. What this means is that machines can be made to perform tasks normally associated with intelligent beings like humans and animals. It is an area of computer science with the help of digital electronics that emphasizes the creation of intelligent machines that work and react as humans.

Artificial Intelligence deals with helping machines find solutions to complex problems in a more human-like fashion. It involves borrowing characteristics from human intelligence, and applying them as algorithms in a computer friendly way.

A more or less flexible or efficient approach can be taken depending on the requirements established, which influences how artificial the intelligent behaviour appears. It emphasizes the creation of intelligent machines that work and react like humans, it is frequently applied to the project of developing systems endowed with the intellectual processes and characteristics of humans, such as the ability to reason, discover meaning, generalize, or learn from past experiences. Since the development of the digital computer in the 1940s, it has been demonstrated that computers can be programmed to carry out very complex tasks normally associated with human intelligence.

AI is generally associated with computer science, but it has developed many important links with other fields such as mathematics, psychology, linguistic, neuron science, sociology, biology, philosophy and many other fields. The term was first coined in 1956 by John McCarthy generally regarded as the father of AI who defined it as the science and engineering of making intelligent machines, especially intelligent computer programs. It is accomplished by studying how human brains think, and how humans learn, decide, and work while trying to solve a problem, and then using the outcomes of the study as a basis of developing intelligent software and systems that can do similar works and tasks like humans. AI is designed to create expert systems which exhibit intelligent behaviour, learn, demonstrate, explain and

advice its users and also to implement human intelligence in machines that create systems that understand, think, learn and behave like humans.

According to Russell and Norvig (2010), AI currently encompasses a huge variety of subfields, ranging from the general (learning and perception) to the specific, such as playing chess, proving mathematical theorems, writing poetry, driving a car on a crowded street and diagnosing diseases. It can be applied in natural language processing, expert and vision systems, speech and handwriting recognition and intelligent robots. In fact, AI is relevant to any intellectual task, it is truly a universal field.

Justice

Justice as a political concept is not very easy to precisely define. As Johari (2012), pointed out that three major difficulties account for this problem of definition. First, different meanings are assigned to it at different times and different places, this makes its implications vary from man to man on account of their varying interpretations. The second difficulty is the dynamic nature and implications of justice changing with the passage of time. The last but by no means the least difficulty is the problem of reconciling the abstract notions of justice with its practical manifestations. For instance, notions of justice such as divine justice or moral justice will not be conformable to any set of empirical standards and for this reason, not capable of practical application. Thus, Potter affirms that “most men think they understand the meaning of justice, but, in fact, their notions prove to be vague.” Similarly, Heywood asserts that no settled or objective concept of justice exists, only a set of competing concepts.

Justice means different things to different people at different times. To a layman, justice may mean due punishment for a crime, to a philosopher, it may mean morality while a lawyer may mean the application of the rule of law. The concept of justice is not a static but an evolutionary concept. In popular discourse, justice is the idea of getting what one deserves, fairness, moral righteousness and equality.

Vallentyne (2003), outlined five senses in which people use justice. In the first sense, justice is understood to mean moral permissibility as applied to distributions of benefits and burdens or as applied to social structures (e.g., legal systems). Here, the specific content of justice is determined by the objects assessed rather than by the set of moral concerns relevant for the assessment. The second sense of “justice” is concerned with what we morally owe others. It is concerned with personal wrongs to others, but not with personal wrongs to self (e.g., failing to develop one’s capacities) or impersonal wrongs (i.e., actions that are wrong but wrong no one; e.g., entertaining certain sexual fantasies, or destroying cultural relics one owns, when this harms no one). In the third sense, “justice” is concerned with the limits of legitimate coercion—with those moral duties we have that others are morally permitted to force us to fulfill. Justice in this sense is concerned only with legitimately enforceable duties (e.g., our duty not to kill others). A fourth sense of “justice” is as *giving each his due* while in the fifth sense, justice is seen as *fairness*. This is the sense in which John Rawls understood justice. Here, the concern is to ensure that individuals get what they are owed to an appropriate extent.

Human rights

Human rights are rights inherent to all human beings. They define relationships between individuals and power structures, especially the State. Human rights delimit State powers and, at the same time, requires States to take positive measures ensuring an environment that enables all people to enjoy their human rights (UNHR, 2016). According to Forsythe (2000), human rights refer to the supposed basic rights and freedoms to which all humans are entitled. Ogu (2023), defined it as entitlements every person has irrespective of his status, race, religion or circumstances. In other words, they are claims which an individual or group of individuals make on the society by virtue of their humanity.

In Nigeria, these rights are outlined in Chapter IV of the 1999 Constitution. The rights include: right to life, right to dignity of the human person, right to personal liberty, right to fair hearing, right to freedom of thought, conscience and religion, right to freedom of expression and the press, right to freedom of

peaceful assembly and association, right to freedom of movement, right to freedom from discrimination and right to acquire and own immovable property anywhere in Nigeria. While their observe and compliance are highly cherished, their violations are pushed according to established standards.

Origin of Artificial Intelligence

While John McCarthy is generally regarded as the father of Artificial Intelligence and Dartmouth College the birthplace of AI, the intellectual roots of AI dates back to the early studies of the nature of knowledge and reasoning. The dream of making a computer imitate humans has a fairly long history dating back to Aristotle who developed an informal system of syllogistic logic which allowed one to generate conclusions mechanically, given initial premises. Thomas Hobbes, Blaise Pascal and Leibniz also contributed to the early development of AI. Hobbes proposed that reasoning was like numerical computation that are added and subtracted in our silent thoughts. In the *Leviathan*, he suggested the idea of an “artificial animal,” arguing “For what is the heart but a spring; and the nerves, but so many strings; and the joints, but so many wheels.” Pascal wrote that the arithmetical machine produces effects which appear nearer to thought than all the actions of animals while Leibniz built a mechanical device intended to carry out operations on concepts rather than numbers. The Leibniz’ machine was able to add, subtract, multiply and take roots which is an advancement on the Pascaline built by Pascal which could only add and subtract. Some speculated that machines might not just do calculations but actually be able to think and act on their own (Russell and Norvig, 2010).

In the 17th Century, René Descartes gave a clear distinction between mind and matter and of the problem that arise. As a dualist, Descartes, held that there is a part of the human mind (or soul or spirit) that is outside of nature, exempt from physical laws. Because animals do not possess this dual quality, they are nothing more than complex machines. In the early 19th Century, George Boole developed Boolean algebra, a fundamental concept in binary logic, which laid the groundwork for the algebra of logic tradition and forms the foundation of digital circuit design and modern computer science. Later, mathematical philosophers like Gottlob Frege, Bertrand Russell, Alfred North Whitehead and Kurt Gödel built on the Boolean algebra to develop mathematical representations of logic problems.

The first work that is now generally recognized as AI was done by Warren McCulloch and Walter Pitts (1943). They laid the foundations for neural networks and drew on three sources: knowledge of the basic physiology and function of neurons in the brain; a formal analysis of propositional logic due to Russell and Whitehead; and Turing’s theory of computation. They proposed a model of artificial neurons in which each neuron is characterized as being “on” or “off,” with a switch to “on” occurring in response to stimulation by a sufficient number of neighboring neurons. The state of a neuron was conceived of as “factually equivalent to a proposition which proposed its adequate stimulus.” They showed, for example, that any computable function could be computed by some network of connected neurons, and that all the logical connectives (and, or, not, etc.) could be implemented by simple net structures. McCulloch and Pitts also suggested that suitably defined networks could learn.

In 1950, Marvin Minsky and Sean Edmonds built the first neural network computer which used 3000 vacuum tubes and a surplus automatic pilot mechanism from a B-24 bomber to simulate a network of 40 neurons. Later, at Princeton, Minsky studied universal computation in neural networks.

In 1956, a two-month workshop held at Dartmouth College where the term Artificial Intelligence was first used. The workshop conjectured that every aspect of learning or any other feature of intelligence can in principle be so precisely described that a machine can be made to stimulate it. The workshop made attempt to find out how to make machines use language, form abstractions and concepts, solve some kind of problems now reserved for humans and improve themselves.

Although the Dartmouth workshop did not lead to any new breakthroughs, it did introduce all the major figures such as McCarthy, Minsky, Trenchard More, Arthur Samuel, Ray Solomonoff, Allen Newell,

Herbert Simon and other to each other. For the next 20 years, the field of AI would be dominated by these people and their students and colleagues at schools and institutions like MIT, CMU, Stanford and IBM.

Exploring AI's impact on social justice and human rights

Artificial Intelligence (AI) has become a very integral part of modern society, influencing the society in very profound ways. That is why the field of artificial intelligence has been increasingly brought to the front of pertinent issues that concern data scientists, academics and organizations. In a world where there is a huge demand for social justice, AI has to play its part. It has become increasingly popular for addressing social justice concerns like inequality, discrimination and human rights violations. While AI indeed creates new potential for advancement, there is need to acknowledge its limitations in order to avoid perpetuating disparities and inequalities.

In our world today, the need to achieve harmony and peace among people of different social and economic strata requires a focused use of AI progress to improve and ensure fairness and equity. The convergence of social justice and AI has become a prominent topic of interest in an age of swift technological progress. Thus, it becomes imperative to examine the limitations of AI and the significance of fairness, accountability and transparency in AI systems that ensures that its use does not perpetuate existing injustices. This it is hoped will improve the lots of marginalized and vulnerable peoples and communities.

One key way that AI impacts social justice is through biased decision-making. AI systems rely on algorithms that are trained on data, and if the data is biased, the resulting system can perpetuate that bias. For example, facial recognition technology has been shown to have higher error rates for people with darker skin tones especially when the algorithms are trained with biased data (Bolukbasi, et al, 2016; Caliskani, et al, 2017). Bolukbasi et al (2016) have even shown that the popular word embedding space Word2Vec, encodes societal gender biases. This could have serious implications for individuals who are misidentified by these systems.

Similarly, predictive policing algorithms have been criticized for perpetuating racial profiling and targeting minority communities leading to unfair treatment and unjust outcomes (Garvie, et al, 2016). Some face recognition systems according to Klare et al (2012), have been shown to misidentify people of colour, women and young people at higher rates. These false positives and unwarranted searches arising from such misidentification and profiling pose a threat to civil liberties (Buolamwini and Gebru, 2018). These examples highlight the importance of attention to the social justice implications of AI and the importance of developing more inclusive and equitable systems.

Another way in which AI impacts on social justice is through the potential for job displacement. While AI has the potential to increase productivity and efficiency, it can also lead to the displacement of workers in certain industries. That is why, for many years, AI has been seen as the enemy of man – as something that replaces instead of collaborating because of the belief that ‘machine can do it faster’. This could have a disproportionate impact on vulnerable communities who may already be struggling to find employment. For example, Ellingrud et al (2023), have shown that low-wage workers, women and people of colour are more likely to be displaced by automation. They report that Generative AI and automation are likely to take over 29.5% of the hours worked in the US economy by 2030. They project that the biggest job losses are likely to occur in office support, customer and food services and such other jobs involving a high share of repetitive tasks, data collection and elementary data processing, all activities that automated systems can handle efficiently. These lower-wages and less education requirements jobs are predominantly held by women and youth generally classified among the marginalized and disadvantaged groups.

Another limitation of AI is the lack of transparency. Many AI algorithms are inherently complex and difficult to interpret making it challenging to understand the rationale behind their decisions. This lack of

transparency can hinder and impede efforts to identify and rectify biases or other unfair practices within the AI systems. There are also concerns about data privacy. A lack of algorithmic transparency can also obscure biases or flaws in AI systems, leading to outcomes that may inadvertently harm certain groups or individuals. Without this transparency, businesses risk eroding customer confidence and potentially breaching regulatory requirements.

AI relies on large datasets, here information about individuals and communities may be collected, stored and analyzed without their consent. Incorporating personal data into AI models without explicit consent poses significant risks, including legal repercussions under data protection laws like GDPR (a public document that states how cloud-hosted companies processes the personal data of their users and other interested parties, and how data protection principles are applied) and potential breaches of ethical standards. Unauthorized use of this data can result in significant privacy invasions and violations, substantial fines, and damage to a company's reputation. Ethically, these actions draw the integrity of businesses into question and undermine customer trust.

Jones (2023) wrote that human rights have so far been largely overlooked in the governance of AI, particularly in the UK and the US, she described this is an error which needs urgent correction. She blamed this omission on the failure to include human rights expertise in AI governance, both in governments and companies. Various myths according to her have also contributed, myths such as the wrong perception of human rights as adding little to ethics, preventing innovation, overly complex, vague, old-fashioned or radical and as only concerning governments. Human rights' protection of autonomy and of economic, social and cultural rights in ensuring that AI will benefit everyone. Jones (2023) further noted that human rights law imposes not only duties on governments to uphold, but also responsibilities on companies and organizations to comply, as well as requirements for legal remedies and reparation of harms.

Developing and deploying AI in socially just manner

To address the issues and concerns raised above about AI, there is need to ensure that AI is developed and deployed in a manner that promotes transparency and accountability in the system. To do this, therefore, demands that the following steps and measures be taken:

1. ***Development of explainable AI systems:*** this is aimed at providing clear explanations for their decisions, as well as through greater oversight and regulation of AI systems. To capture the full benefits of AI to make knowledge work more productive, employers, policy makers and the broader ecosystems would need to establish clear guidelines and guardrails and workers would need to see those tools not as job destroyers and displacers but as work enhancers (Ellingrud, 2023). Workers will need to gain proficiency with the AI tools and, importantly, use the time that is freed up to focus on higher value activities.
2. ***Representation of diverse perspectives in the development and deployment of AI systems:*** there is need to recognize and appreciate the variety of human experiences, viewpoints and identities which is fundamental to social justice based on the principle of inclusion. New possibilities for amplifying underrepresented perspectives, combating systemic prejudices and promoting equal representation in all fields have to be scaled up using the advancements in AI. AI has tremendous promise for fostering diversity and inclusion, from reducing algorithmic biases in recruiting to make more accessible spaces for people with impairments. To realize this promise, however, work must be done to build, deploy and regulate AI systems in a way that is fair, transparent and accountable.
3. ***Empowering marginalized and vulnerable groups:*** empowerment is essential for social justice; it enables individuals and groups to assert their rights, get resources and engage actively in civic activities. Thus, AI technology must be used to make access to information, education and

opportunities more widely available, especially for disadvantaged, marginalized and vulnerable groups like women, youth, people living with disability and HIV/AIDS and so on. AI could also be used to enhance the representation of such groups through personalized learning platforms, community-driven healthcare programs and inclusive urban design. True empowerment demands more than just technological fixes, it also involves more than anything else, breaking down systemic obstacles, tackling power disparities and ensuring that disadvantaged groups have a say and contribute to the decision-making process.

4. ***Fostering collaboration and solidarity***: collaboration across disciplinary boundaries, national borders and ideological differences is essential to achieve harmony among humanity. AI breakthroughs present a distinct chance to promote unity in tackling urgent social justice concerns, such as climate change, poverty, human rights and public health. By utilizing knowledge, innovations and empathy from diverse fields, AI powered solutions may be developed that can potentially solve many society's problems, such as enhancement of communal welfare and environmental stewardship. It is equally important to cultivate a culture that values empathy, reciprocity and mutual respect to develop strong communities and nurture a feeling of common humanity in a globalized world.
So, by fostering interdisciplinary collaboration between technologists, social justice and human rights advocates, policymakers and other stakeholders, more equitable AI systems that promote fairness, accountability and transparency may be developed. As AI continues to shape our society, it is our collective responsibility to ensure that these technologies are harnessed for the greater good and contribute positively to the fight for social justice.
5. **Establishment of human rights as foundation for AI governance**: as Jones (2023) noted, companies and investors, governments, international organizations and civil society should take steps to establish human rights as the foundation on which AI governance is built, including through inclusive discussion, championing human rights and establishing standards and processes for implementation of human rights law and remedy in case of breach.
6. **Protection of data privacy**: Businesses leveraging biometric AI must ensure robust privacy protections to maintain user trust and comply with stringent legal standards governing biometric data.

Conclusion

Future research and development in AI should focus on creating tools and frameworks to minimize biases, improve transparency, and enhance ethical decision-making. Additionally, efforts must be made to bridge the digital divide and ensure that AI-driven social justice initiatives are accessible to all, regardless of their socioeconomic status or background.

By embracing a proactive and collaborative approach, we can work together to leverage the power of AI in the pursuit of a more just and equitable world. This will require ongoing dialogue, research, and commitment from all stakeholders, as we strive to create AI systems that reflect our shared values and contribute to the betterment of society as a whole.

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